

Rediscovery of *Lipinia macrotympanum* (Stoliczka, 1873) from the Nicobar Islands, India

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Abstract.– Stoliczka's (1873) *Mocoo macrotympanum*, known from the holotype collected over 120 years ago from the Andaman Islands, India, is redescribed on the basis of two specimens from Little and Great Nicobar Islands, India. The species is diagnosed by: small body size (SVL up to 38.1 mm); tympanum exposed; disk on lower eyelid translucent; prefrontals separate; the failure of the adpressed hind limbs to meet the fore limbs; 21–23 smooth midbody scale rows; 15–17 subdigital scensors under toe IV; three pairs of nuchals; four supraoculars; seven supralabials (supralabial V in midorbit position); six infralabials; and lateral bands starting from the nostrils.

Key words.– *Lipinia macrotympanum*, Sauria, Scincidae, Great Nicobar, Little Nicobar, India.

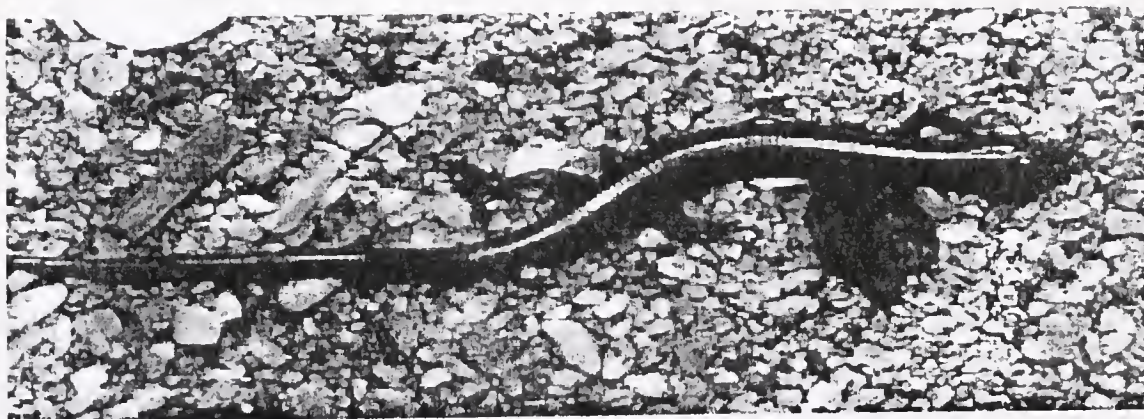


Figure 1. *Lipinia macrotympanum* (MCZ R-176760) from Pulo Ulan (07 03'N; 93 35'E), Little Nicobar, India, in life.

Introduction

Mocoo macrotympanum was described by Stoliczka (1873), based on a single example from "South Andaman...on a sandy beach in Macpherson's Straits" (11° 31'N; 92° 39'E), which lie between South Andamans and Rutland Island, that was deposited in the collection of the Asiatic Society of Bengal, in Calcutta. The holotype is now in the collection of the Zoological Survey of India (ZSI 5571). No further examples of this distinctive species have come to light. In Mittleman's (1952) synopsis of scincids, the species was assigned to the genus *Scincella*, although Greer (1974) subsequently placed Stoliczka's species in the genus *Lipinia*, now known to include 20 nominal species (Austin, 1995; Greer, 1974; Greer and Mys, 1987) that are diagnosable by their small (SVL 56 mm) size, generally slender body, lack of a postorbital

bone and a dorsal color pattern of striking light, and dark longitudinal stripes. Their distribution includes the insular regions of south-east Asia, including the Sundas east to the Philippines, New Guinea, with one species (*L. noctua*) reaching Polynesia, further east (see Fig. 45 in Greer, 1974, and Fig. 8 in Zweifel, 1979) that is suspected to be spread through human agencies (Greer, 1989). Only one species (*L. vittigera*) has been recorded from the Asian mainland (Greer, 1974).

The collection of an example (Fig. 1) of *Lipinia macrotympanum* during field work conducted in the Nicobars in 1994 and an examination of another Nicobarese specimen (from Great Nicobar), referred to *Sphenomorphus quadrivittatum*, although with some hesitation, by Biswas and Sanyal (1977), provide an opportunity to both enlarge the description of

the species based on the two Nicobarese specimens and announce its rediscovery after over 120 years.

Material and Methods

The material from Little Nicobar was fixed in 10% formalin for two weeks, soaked in distilled water to remove the formalin for a day and finally preserved in 70% ethanol. The following measurements were taken 13-14 months (for the material from Little Nicobar) and 29 years (the material from Great Nicobars) after collection, with dial vernier caliper (to the nearest 0.1 mm): snout-vent length (SVL; from the tip of the snout to the vent), tail length (TL; from the vent to the tip of the unregenerated tail), tail width (TW; measured at the base of the tail); head length (HL; the distance between the angle of the jaws and the snout-tip), head width (HW; measured at the angle of the jaws), head depth (HD; the maximum height of the head, from the forehead to the throat), tympanum diameter (TYD; the greatest [vertical] diameter of the tympanum), body width (BW; the greatest width of the body), axilla to groin length (A-G; the distance between the posterior edge of the fore limb and the anterior edge of the hind limb), eye diameter (ED; the greatest diameter of the orbit), eye to nostril distance (E-N; the distance between the anterior-most point of the eyes and the nostrils), eye to snout distance (E-S; the distance between the anterior-most point of the eyes and the tip of the snout), eye to ear distance (E-E; the distance from the anterior edge of the ear opening to the posterior corner of the eyes), greatest ear length (EL; the greatest diameter of the ear opening), internarial distance (IN; the distance between the upper eyelids), fore limb length (FOL; the length of the outstretched fore limb, from axilla to the tip of its longest finger), and hind limb length (HIL; the length of the outstretched hind limbs, from vent to the tip of its longest toe).

Institutional abbreviations follow Leviton *et al.* (1985). Color nomenclature is that suggested by Smith (1974; 1981) and taken from Kodak Gold film. Nomenclature of dorsal striping is after Storr *et al.* (1981).

Lipinia macrotympanum (Stoliczka, 1873)

Material examined: MCZ R-176760, Pulo Ulan (07 03'N; 93 35'E), Little Nicobar, India. Coll. Indraneil Das and Satish Bhaskar. 31 March, 1994; ZSI 22508, Campbell Bay (06 50'N; 93 50'E), Great Nicobar, India. Coll. A. Daniel, Great Nicobar Expedition, 1966.

Diagnosis.- A member of the genus *Lipinia* (fide Greer, 1974), differentiable from congeneric species

in possessing the following suite of characteristics: small body size (SVL up to 38.1 mm); tympanum exposed; disk on lower eyelid translucent; prefrontals separate; failure of the adpressed hind limbs to meet the fore limbs; 21-23 smooth midbody scale rows; 15-17 subdigital scensors under toe IV; three pairs of nuchals; four supraoculars; seven supralabials (supralabial V in midorbit position); six infralabials; and lateral bands starting from the nostrils.

Redescription.- In general form, a supple skink, the body elongated with fairly well-developed limbs. Head relatively small (HL/SVL ratios 0.15 and 0.16), snout acute, the sides converging to a distinctly rounded tip; head relatively more slender than the body, with a distinct neck, and longer than wide; head and body slightly depressed dorso-ventrally; tail long (TL/SVL ratios 1.20 and 1.41), rounded in cross section and tapering to a sharp point.

Rostral enlarged and visible dorsally, broader than high, forming a straight suture with frontonasal; supranasals absent; postnasals contact supralabial II; two loreals contact supralabials II and III; two preoculars, smaller (preocular I) in contact with supralabial IV; supralabials seven; infralabials eight; presubocular in contact with both supralabials IV and V; supralabial IV in midorbital position; last supralabials horizontally split; frontonasal broader than long, broadly in contact with the rostral anteriorly and with the prefrontals posteriorly; prefrontals not in contact with each other; supraoculars four; frontal long, spear-shaped, in contact with supraoculars I and II; fused fronto-parietals; interparietal triangular, with apex partially dividing parietals, and covering a relatively large and distinct parietal eye; supraciliaries 10; two pre-temporals; two primary temporals; two secondary temporals; three pairs of smooth nuchals; mental wider than long, in contact with infralabials I and II; postmental longer than wide, in contact with infralabials II and III; three pairs of chin shields follow the postmental on each side, the first pair in contact with each other, the second pair divided medially by the a single row of ventral scale, and the third pair separated by three rows of ventral scales; tympanum exposed, longer vertically, its greatest length more than half eye diameter (ED/EL ratios 1.30 and 1.64), shallow, lacking lobules.

Body slender (BW/SVL ratios 0.12 and 0.13); fore and hind limbs well developed (FOL/SVL and HIL/SVL ratios 0.22 and 0.23, and 0.32 and 0.33, respectively), adpressed hind limbs fail to touch fore limbs.

Dorsally, the scales on body, limbs and tail are smooth; ventrally, scales imbricate with three to four very fine striations; midbody scale rows 21 and 23;

Table 1. Meristic data (in mm) on the two Nicobarese specimens of *Lipinia macrotympanum*

	MCZ R-176760	ZSI 22508
Snout-vent length	38.1	36.5
Tail length	53.6	43.9
Tail width	3.3	3.6
Head length	5.8	5.8
Head width	3.9	3.7
Head depth	3.2	3.4
Body width	4.7	4.7
Axilla to groin distance	20.2	21.3
Eye diameter	1.8	1.3
Eye to nostril distance	1.6	1.5
Eye to snout distance	2.7	2.9
Eye to ear distance	2.9	2.6
Ear length	1.1	1.0
Internarial distance	1.7	1.3
Fore limb length	8.4	8.4
Hind limb length	12.5	11.7

ventral scale rows (postmental to anal) 62; preanals not enlarged; tripartite, the inner scales overlapping the outer; ventrally, tail scales smooth, with imbricate scales, the median series not being enlarged; scales on palms and soles flattened and rounded. Subdigital lamellae (MCZ R-176760) are as follows: (right fore limb) finger I: 5; finger II: 9; finger III: 11; finger IV: 11; finger V: 7; (right hind limb) toe I: 7; toe II: 12; toe III: 13; toe IV: 16; toe V: 11, transversely enlarged, pad-like.

Measurements (in mm) of the two Nicobarese specimens are in Table 1. Subdigital formulae: $4 > 3 > 2 > 5 > 1$ (manus); $4 > 3 > 2 > 5 > 1$ (pes).

Color.— Vertebral stripe trogon yellow; paravertebral stripes blackish neutral gray; dorsals trogon yellow; dorsolateral stripes blackish neutral gray; snout cinnamon; ventrally, the body is an unpatterned cream; tail beyond cloaca burnt orange both dorsally and ventrally; upper surfaces of limbs Pratt's rufous; under-

surface of manus and pes gray-brown (in preservative).

Ecological notes.— Of the specimen from Great Nicobars, no field data are on record. Stoliczka's type was taken from a beach, as was MCZ R-176760, which was found moving with great agility over sand, into which it made no attempts to burrow. Anecdotal notes, and in certain cases, more detailed observations on most of its congeners suggest however that members of the genus *Lipinia* are largely arboreal (e.g., Brown and Fehlmann, 1958, for *L. leptosoma*; Loveridge, 1948:360, for *L. miotis*; Brown and Alcalá, 1980:95-96, for *L. pulchella*, Brown and Alcalá, 1980:87, for *L. quadrivittata*, Greer and Mys, 1987, for *L. rouxi*; Brown and Alcalá, 1980:100, for *L. semperi*, Brown and Alcalá, 1980:89, for *L. subvittata* Smith, 1930:36; 1935:307, for *L. vittigera*), although *L. noctua*, which is arboreal elsewhere (Greer and Mys, 1987; Loveridge, 1948:358), is substrate dwelling on some of the

islands of Fiji (Zug, 1991) and Hawaii (Oliver and Shaw, 1953; McMorris, 1970). The holotype of *Lipinia macrotympanum* contained two eggs (Smith, 1935).

Variation.—The differences between the holotype and hitherto only known specimen, as given by Stoliczka (1873) and the fresh material from the Nicobars are understandable, given the distance between the two island groups. The holotype showed 15 lamellae under the fourth toe (as opposed to 16 and 17) and 22 midbody scale rows (vs 21 and 22 in the Nicobarese material). In addition, the color notes taken by Stoliczka (1873) indicate that the ventral surface of his specimen (a gravid female) was livid carneous tinged with orange, while the Nicobarese specimens have an unpatterned cream belly.

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